

CEX_weighting_indexing

February 11, 2025

1 Setup and Data

```
[3]: from inflation_analysis import calculate_price_indexes
from tabulate import tabulate
import matplotlib.pyplot as plt

# Parameters
start_year = 2012
end_year = 2022
top_n = 10

data_folder="/Users/roykisluk/Downloads/Consumer_Expenditure_Survey/"
base_year = start_year
years=range(start_year, end_year+1)

combined_df, combined_secondary_df, combined_primary_df, yearly_price_index = \
    ↪calculate_price_indexes(start_year, end_year, base_year, \
    ↪cex_data_folder=data_folder)
```

```
Loading price data: 100%|          | 11/11 [00:09<00:00, 1.18it/s]
Calculating price indexes: 100%|        | 11/11 [00:32<00:00, 2.92s/it]
```

```
[4]: # Number of products in each year
for year in years:
    print(f"Number of products in year: {year}")
    print(combined_df[(combined_df['Year'] == year)]['prodcode'].count())
```

```
Number of products in year: 2012
813
Number of products in year: 2013
788
Number of products in year: 2014
785
Number of products in year: 2015
785
Number of products in year: 2016
780
Number of products in year: 2017
```

767

Number of products in year: 2018

763

Number of products in year: 2019

740

Number of products in year: 2020

711

Number of products in year: 2021

722

Number of products in year: 2022

715

2 Output

2.1 Yearly Price Indexes

```
[5]: # Display yearly price index per year in tabulate
print("Yearly Price Index:")
print(tabulate(yearly_price_index.items(), headers=["Year", "Price Index"],
             tablefmt="grid"))
```

Yearly Price Index:

| Year | Price Index |
|------|-------------|
| 2012 | 100 |
| 2013 | 102.704 |
| 2014 | 105.011 |
| 2015 | 106.058 |
| 2016 | 109.33 |
| 2017 | 108.949 |
| 2018 | 106.309 |
| 2019 | 112.98 |
| 2020 | 118.306 |
| 2021 | 121.457 |
| 2022 | 124.8 |

2.2 Top Increases and Decreases

```
[6]: # Plot top and bottom price indexes for each year
df_top_secondary = {}
df_bottom_secondary = {}
df_top_primary = {}
df_bottom_primary = {}
for year in years:
    df_top_secondary[year] =
    combined_secondary_df[combined_secondary_df['Year'] == year].nlargest(top_n,
    'price_index')
    df_bottom_secondary[year] =
    combined_secondary_df[combined_secondary_df['Year'] == year].
    nsmallest(top_n, 'price_index')
    df_top_primary[year] = combined_primary_df[combined_primary_df['Year'] ==
    year].nlargest(top_n, 'price_index')
    df_bottom_primary[year] = combined_primary_df[combined_primary_df['Year']
    == year].nsmallest(top_n, 'price_index')
    if year != base_year:
        print(f"Year: {year}")
        print("Top price indexes (Secondary):")
        print(tabulate(df_top_secondary[year], headers='keys', tablefmt='psql'))
        print("Bottom price indexes (Secondary):")
        print(tabulate(df_bottom_secondary[year], headers='keys',
        tablefmt='psql'))
        print("Top price indexes (Primary):")
        print(tabulate(df_top_primary[year], headers='keys', tablefmt='psql'))
        print("Bottom price indexes (Primary):")
        print(tabulate(df_bottom_primary[year], headers='keys',
        tablefmt='psql'))
```

Year: 2013

Top price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-----|------|----------|-------------|------------|---------------------------------|
| 84 | 2013 | 321 | 215.98 | 0.00129227 | Government Taxes |
| 89 | 2013 | 333 | 144.728 | 0.0185018 | Home Maintenance And Renovation |
| 67 | 2013 | 301 | 128.955 | 0.00716347 | Vegetable Oils And Products |
| 129 | 2013 | 397 | 124.433 | 0.00330996 | Organization Fees And Donations |
| 123 | 2013 | 391 | 118.31 | 0.0164177 | Cigarettes Tobacco |

| | | | | | | |
|----------------------|-----|---------|-----------|--------------------|--|--|
| And Smoking Supplies | | | | | | |
| 90 2013 | 334 | 114.675 | 0.0134614 | Household Help | | |
| 76 2013 | 311 | 113.605 | 0.0033592 | Potatoes And Sweet | | |
| Potatoes | | | | | | |
| 74 2013 | 308 | 113.341 | 0.0483041 | Meals Outside Home | | |
| 93 2013 | 341 | 112.032 | 0.0142276 | Furniture | | |
| 70 2013 | 304 | 112.018 | 0.0467045 | Dairy Products And | | |
| Eggs | | | | | | |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|----------------------|-------------|
| 127 2013 | 395 | 53.5148 | 0.0136326 | Personal Jewelry And | |
| Watches | | | | | |
| 126 2013 | 394 | 82.7185 | 0.0109822 | Legal And Other | |
| Services | | | | | |
| 113 2013 | 373 | 82.9333 | 0.0213472 | Culture Sports And | |
| Entertainment Events | | | | | |
| 86 2013 | 324 | 83.1667 | 0.0025159 | Other Housing | |
| Expenses | | | | | |
| 104 2013 | 357 | 86.8029 | 0.000677874 | External Cleaning | |
| And Laundry | | | | | |
| 106 2013 | 359 | 88.7769 | 0.000771721 | Outerwear Not | |
| Elsewhere Specified | | | | | |
| 116 2013 | 376 | 89.7606 | 0.01849 | Hobbies Sports | |
| Equipment And Camping | | | | | |
| 96 2013 | 344 | 90.1769 | 0.00494777 | Bed Linens And | |
| Towels | | | | | |
| 117 2013 | 378 | 90.2165 | 0.00531507 | Computer Internet | |
| And Products | | | | | |
| 111 2013 | 371 | 90.6824 | 0.0363399 | Education Services | |

Top price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|--|------|----------|-------------|--------|-------------|
|--|------|----------|-------------|--------|-------------|

| | | | | | | |
|-----------------------|------|----|---------|-----------|-------------------------|--|
| | | | | | | |
| 13 | 2013 | 33 | 109.819 | 0.104108 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 10 | 2013 | 30 | 108.175 | 0.270011 | Food Total Excluding | |
| Fruits And Vegetables | | | | | | |
| 14 | 2013 | 34 | 105.262 | 0.0552936 | Furniture And Household | |
| Equipment Total | | | | | | |
| 11 | 2013 | 31 | 104.811 | 0.0621729 | Vegetables And Fruits | |
| Total | | | | | | |
| 15 | 2013 | 35 | 101.62 | 0.069324 | Clothing And Footwear | |
| Total | | | | | | |
| 16 | 2013 | 36 | 101.048 | 0.0547316 | Health Total | |
| | | | | | | |
| 18 | 2013 | 38 | 100.386 | 0.156141 | Transport And | |
| Communication Total | | | | | | |
| 12 | 2013 | 32 | 96.5692 | 0.031668 | Housing Total | |
| | | | | | | |
| 19 | 2013 | 39 | 96.2704 | 0.0863405 | Miscellaneous Goods And | |
| Services Total | | | | | | |
| 17 | 2013 | 37 | 91.6948 | 0.11021 | Education Culture And | |
| Entertainment Total | | | | | | |

Bottom price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|-----------|-------------------------|
| ----- | | | | | |
| | | | | | |
| 17 | 2013 | 37 | 91.6948 | 0.11021 | Education Culture And |
| Entertainment Total | | | | | |
| 19 | 2013 | 39 | 96.2704 | 0.0863405 | Miscellaneous Goods And |
| Services Total | | | | | |
| 12 | 2013 | 32 | 96.5692 | 0.031668 | Housing Total |
| | | | | | |
| 18 | 2013 | 38 | 100.386 | 0.156141 | Transport And |
| Communication Total | | | | | |
| 16 | 2013 | 36 | 101.048 | 0.0547316 | Health Total |
| | | | | | |
| 15 | 2013 | 35 | 101.62 | 0.069324 | Clothing And Footwear |
| Total | | | | | |
| 11 | 2013 | 31 | 104.811 | 0.0621729 | Vegetables And Fruits |
| Total | | | | | |
| 14 | 2013 | 34 | 105.262 | 0.0552936 | Furniture And Household |
| Equipment Total | | | | | |
| 10 | 2013 | 30 | 108.175 | 0.270011 | Food Total Excluding |
| Fruits And Vegetables | | | | | |

| | | | | | |
|-------------------|------|----|---------|----------|------------------------|
| 13 | 2013 | 33 | 109.819 | 0.104108 | Dwelling And Household |
| Maintenance Total | | | | | |

Year: 2014

Top price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-------------------------------------|------|----------|-------------|-------------|--|
| -----+-----+-----+-----+-----+----- | | | | | |
| | | | | | |
| 149 | 2014 | 321 | 376.224 | 0.0016658 | Government Taxes |
| 179 | 2014 | 374 | 138.963 | 0.0141364 | Recreation Vacation And Trips |
| 188 | 2014 | 391 | 130.429 | 0.0164082 | Cigarettes Tobacco And Smoking Supplies |
| 132 | 2014 | 301 | 130.239 | 0.0071593 | Vegetable Oils And Products |
| 154 | 2014 | 333 | 126.703 | 0.018491 | Home Maintenance And Renovation |
| 146 | 2014 | 316 | 117.967 | 0.000275406 | Preserved And Frozen Fruits |
| 171 | 2014 | 359 | 117.289 | 0.000771272 | Outerwear Not Elsewhere Specified |
| 138 | 2014 | 307 | 116.035 | 0.00658131 | Alcoholic Beverages |
| 177 | 2014 | 372 | 115.728 | 0.00432804 | Books And Stationery |
| 187 | 2014 | 385 | 115.402 | 0.0132194 | Mail Telephone And Communication |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-------------------------------------|------|----------|-------------|------------|----------------------|
| -----+-----+-----+-----+-----+----- | | | | | |
| | | | | | |
| 192 | 2014 | 395 | 54.5338 | 0.0136247 | Personal Jewelry And |
| Watches | | | | | |
| 151 | 2014 | 324 | 62.0092 | 0.00251443 | Other Housing |
| Expenses | | | | | |
| 158 | 2014 | 341 | 81.5672 | 0.0141838 | Furniture |
| | | | | | |
| 191 | 2014 | 394 | 83.8786 | 0.0109664 | Legal And Other |

| | | | | | | |
|------------------------|------|-----|---------|------------|---------------------|--|
| Services | | | | | | |
| 167 | 2014 | 355 | 89.873 | 0.00164778 | Various Clothing | |
| Items | | | | | | |
| 178 | 2014 | 373 | 94.705 | 0.0214725 | Culture Sports And | |
| Entertainment Events | | | | | | |
| 164 | 2014 | 352 | 95.5492 | 0.0228031 | Womens Outerwear | |
| | | | | | | |
| 181 | 2014 | 376 | 96.8684 | 0.0184793 | Hobbies Sports | |
| Equipment And Camping | | | | | | |
| 174 | 2014 | 363 | 97.0207 | 0.00981199 | Health Services | |
| Expenses | | | | | | |
| 180 | 2014 | 375 | 97.0925 | 0.0102239 | Durable Culture And | |
| Entertainment Products | | | | | | |

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Top price indexes (Primary):

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| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|-----------|-------------------------|
| | | | | | |
| | | | | | |
| 22 | 2014 | 32 | 113.13 | 0.031945 | Housing Total |
| | | | | | |
| 20 | 2014 | 30 | 109.448 | 0.269821 | Food Total Excluding |
| Fruits And Vegetables | | | | | |
| 23 | 2014 | 33 | 107.918 | 0.104048 | Dwelling And Household |
| Maintenance Total | | | | | |
| 27 | 2014 | 37 | 105.943 | 0.110278 | Education Culture And |
| Entertainment Total | | | | | |
| 21 | 2014 | 31 | 105.607 | 0.0621367 | Vegetables And Fruits |
| Total | | | | | |
| 26 | 2014 | 36 | 102.028 | 0.0546905 | Health Total |
| | | | | | |
| 28 | 2014 | 38 | 101.425 | 0.155916 | Transport And |
| Communication Total | | | | | |
| 24 | 2014 | 34 | 100.914 | 0.0556011 | Furniture And Household |
| Equipment Total | | | | | |
| 25 | 2014 | 35 | 99.8903 | 0.0692836 | Clothing And Footwear |
| Total | | | | | |
| 29 | 2014 | 39 | 98.1264 | 0.0862808 | Miscellaneous Goods And |
| Services Total | | | | | |

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Bottom price indexes (Primary):

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| | Year | prodcode | price_index | weight | description |
|--|------|----------|-------------|--------|-------------|
|--|------|----------|-------------|--------|-------------|

| | | | | | | | |
|--|----|------|----|---------|-----------|--|--|
| | | | | | | | |
| | 29 | 2014 | 39 | 98.1264 | 0.0862808 | Miscellaneous Goods And Services Total | |
| | 25 | 2014 | 35 | 99.8903 | 0.0692836 | Clothing And Footwear Total | |
| | 24 | 2014 | 34 | 100.914 | 0.0556011 | Furniture And Household Equipment Total | |
| | 28 | 2014 | 38 | 101.425 | 0.155916 | Transport And Communication Total | |
| | 26 | 2014 | 36 | 102.028 | 0.0546905 | Health Total | |
| | 21 | 2014 | 31 | 105.607 | 0.0621367 | Vegetables And Fruits Total | |
| | 27 | 2014 | 37 | 105.943 | 0.110278 | Education Culture And Entertainment Total | |
| | 23 | 2014 | 33 | 107.918 | 0.104048 | Dwelling And Household Maintenance Total | |
| | 20 | 2014 | 30 | 109.448 | 0.269821 | Food Total Excluding Fruits And Vegetables | |
| | 22 | 2014 | 32 | 113.13 | 0.031945 | Housing Total | |

Year: 2015

Top price indexes (Secondary):

| | | | | | | | |
|--|-----|------|----------|-------------|-------------|---|--|
| | | Year | prodcode | price_index | weight | description | |
| | 238 | 2015 | 362 | 157.387 | 0.0124736 | Dental Care | |
| | 237 | 2015 | 361 | 145.418 | 0.002309 | Health Insurance | |
| | 253 | 2015 | 391 | 134.89 | 0.0163985 | Cigarettes Tobacco And Smoking Supplies | |
| | 214 | 2015 | 321 | 132.422 | 4.20527e-05 | Government Taxes | |
| | 216 | 2015 | 324 | 131.569 | 0.00252258 | Other Housing Expenses | |
| | 211 | 2015 | 316 | 126.994 | 0.000276299 | Preserved And Frozen Fruits | |
| | 234 | 2015 | 357 | 124.698 | 0.000679675 | External Cleaning And Laundry | |
| | 224 | 2015 | 342 | 124.245 | 0.0196944 | Electrical Equipment | |

| | | | | | | |
|---------------------|------|-----|---------|------------|---------------|--|
| For Home | | | | | | |
| 249 | 2015 | 382 | 123.456 | 0.0126248 | Travel Abroad | |
| 260 | 2015 | 398 | 122.279 | 0.00253118 | Expenses Not | |
| Elsewhere Specified | | | | | | |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|------------|----------------------|
| 257 | 2015 | 395 | 54.3012 | 0.0136688 | Personal Jewelry And |
| Watches | | | | | |
| 256 | 2015 | 394 | 67.309 | 0.0110114 | Legal And Other |
| Services | | | | | |
| 223 | 2015 | 341 | 88.2823 | 0.0142654 | Furniture |
| 241 | 2015 | 371 | 90.9115 | 0.0364364 | Education Services |
| 250 | 2015 | 383 | 94.3996 | 0.11038 | Vehicle Expenses |
| 232 | 2015 | 355 | 95.728 | 0.00165312 | Various Clothing |
| Items | | | | | |
| 229 | 2015 | 352 | 96.2476 | 0.0228771 | Womens Outerwear |
| 258 | 2015 | 396 | 96.5979 | 0.00784628 | Bags Suitcases And |
| Other Products | | | | | |
| 235 | 2015 | 358 | 97.2428 | 0.0164521 | Footwear |
| 246 | 2015 | 376 | 97.2434 | 0.0185392 | Hobbies Sports |
| Equipment And Camping | | | | | |

Top price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|-----------|-----------------------|
| 36 | 2015 | 36 | 119.577 | 0.0548677 | Health Total |
| 30 | 2015 | 30 | 112.468 | 0.270651 | Food Total Excluding |
| Fruits And Vegetables | | | | | |
| 31 | 2015 | 31 | 112.382 | 0.0623381 | Vegetables And Fruits |

| | | | | | | |
|---------------------|------|----|---------|-----------|-------------------------|--|
| Total | | | | | | |
| 34 | 2015 | 34 | 106.837 | 0.0557126 | Furniture And Household | |
| Equipment Total | | | | | | |
| 33 | 2015 | 33 | 105.451 | 0.104051 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 32 | 2015 | 32 | 103.05 | 0.0304985 | Housing Total | |
| | | | | | | |
| 38 | 2015 | 38 | 100.406 | 0.156556 | Transport And | |
| Communication Total | | | | | | |
| 37 | 2015 | 37 | 99.7914 | 0.109311 | Education Culture And | |
| Entertainment Total | | | | | | |
| 35 | 2015 | 35 | 99.1924 | 0.0695081 | Clothing And Footwear | |
| Total | | | | | | |
| 39 | 2015 | 39 | 97.8256 | 0.086507 | Miscellaneous Goods And | |
| Services Total | | | | | | |

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Bottom price indexes (Primary):

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| | | | | | |
|-----------------------|------|----------|-------------|-----------|-------------------------|
| | Year | prodcode | price_index | weight | description |
| | | | | | |
| | | | | | |
| 39 | 2015 | 39 | 97.8256 | 0.086507 | Miscellaneous Goods And |
| Services Total | | | | | |
| 35 | 2015 | 35 | 99.1924 | 0.0695081 | Clothing And Footwear |
| Total | | | | | |
| 37 | 2015 | 37 | 99.7914 | 0.109311 | Education Culture And |
| Entertainment Total | | | | | |
| 38 | 2015 | 38 | 100.406 | 0.156556 | Transport And |
| Communication Total | | | | | |
| 32 | 2015 | 32 | 103.05 | 0.0304985 | Housing Total |
| | | | | | |
| 33 | 2015 | 33 | 105.451 | 0.104051 | Dwelling And Household |
| Maintenance Total | | | | | |
| 34 | 2015 | 34 | 106.837 | 0.0557126 | Furniture And Household |
| Equipment Total | | | | | |
| 31 | 2015 | 31 | 112.382 | 0.0623381 | Vegetables And Fruits |
| Total | | | | | |
| 30 | 2015 | 30 | 112.468 | 0.270651 | Food Total Excluding |
| Fruits And Vegetables | | | | | |
| 36 | 2015 | 36 | 119.577 | 0.0548677 | Health Total |
| | | | | | |

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```

Year: 2016

Top price indexes (Secondary):

| ----- | | | | | | |
|-----------------------------------|------|----------|-------------|-------------|----------------------|--|
| | Year | prodcode | price_index | weight | description | |
| ----- | | | | | | |
| 303 | 2016 | 362 | 487.447 | 0.0124629 | Dental Care | |
| 279 | 2016 | 321 | 465.83 | 0.0012957 | Government Taxes | |
| 318 | 2016 | 391 | 139.883 | 0.0164472 | Cigarettes Tobacco | |
| And Smoking Supplies | | 397 | 139.431 | 0.0033159 | Organization Fees | |
| And Donations | | 317 | 131.193 | 0.00618806 | Dried Fruits | |
| 298 | 2016 | 356 | 129.564 | 0.000713502 | Sewing Materials And | |
| Accessories | | 398 | 128.053 | 0.00252901 | Expenses Not | |
| Elsewhere Specified | | 313 | 124.042 | 0.0157405 | Fresh Fruits | |
| 284 | 2016 | 333 | 120.179 | 0.018535 | Home Maintenance And | |
| Renovation | | 304 | 120.055 | 0.0467883 | Dairy Products And | |
| Eggs | | | | | | |
| ----- | | | | | | |
| Bottom price indexes (Secondary): | | | | | | |
| ----- | | | | | | |
| | Year | prodcode | price_index | weight | description | |
| ----- | | | | | | |
| 322 | 2016 | 395 | 44.8542 | 0.0136571 | Personal Jewelry And | |
| Watches | | 394 | 69.1725 | 0.010875 | Legal And Other | |
| Services | | 341 | 80.5125 | 0.0142176 | Furniture | |
| 281 | 2016 | 324 | 83.0089 | 0.0012823 | Other Housing | |
| Expenses | | 396 | 88.8346 | 0.00783674 | Bags Suitcases And | |
| Other Products | | 352 | 89.4408 | 0.0228574 | Womens Outerwear | |
| 302 | 2016 | 361 | 89.9151 | 0.00230702 | Health Insurance | |

| | | | | | | |
|----------------------|------|-----|---------|------------|-----------------------|--|
| | | | | | | |
| 283 | 2016 | 332 | 90.5842 | 0.03184 | Electricity Gas And | |
| Fuel For Home | | | | | | |
| 291 | 2016 | 344 | 91.1254 | 0.00495665 | Bed Linens And Towels | |
| | | | | | | |
| 308 | 2016 | 373 | 91.5601 | 0.0215236 | Culture Sports And | |
| Entertainment Events | | | | | | |

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Top price indexes (Primary):

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| | | | | | | |
|-----------------------|------|------|----------|-------------|-------------------------|-------------|
| | | Year | prodcode | price_index | weight | description |
| | | | | | | |
| | | | | | | |
| 46 | 2016 | 36 | 191.316 | 0.0548813 | Health Total | |
| | | | | | | |
| 41 | 2016 | 31 | 115.928 | 0.0622845 | Vegetables And Fruits | |
| Total | | | | | | |
| 40 | 2016 | 30 | 113.56 | 0.270475 | Food Total Excluding | |
| Fruits And Vegetables | | | | | | |
| 42 | 2016 | 32 | 112.809 | 0.0304088 | Housing Total | |
| | | | | | | |
| 43 | 2016 | 33 | 105.184 | 0.103865 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 47 | 2016 | 37 | 99.5753 | 0.11022 | Education Culture And | |
| Entertainment Total | | | | | | |
| 49 | 2016 | 39 | 98.4047 | 0.0863636 | Miscellaneous Goods And | |
| Services Total | | | | | | |
| 44 | 2016 | 34 | 96.583 | 0.055737 | Furniture And Household | |
| Equipment Total | | | | | | |
| 48 | 2016 | 38 | 96.0765 | 0.156317 | Transport And | |
| Communication Total | | | | | | |
| 45 | 2016 | 35 | 95.9577 | 0.0694484 | Clothing And Footwear | |
| Total | | | | | | |

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Bottom price indexes (Primary):

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| | | | | | | |
|-------|------|------|----------|-------------|-----------------------|-------------|
| | | Year | prodcode | price_index | weight | description |
| | | | | | | |
| | | | | | | |
| 45 | 2016 | 35 | 95.9577 | 0.0694484 | Clothing And Footwear | |
| Total | | | | | | |
| 48 | 2016 | 38 | 96.0765 | 0.156317 | Transport And | |

| | | | | | | |
|-----------------------|------|----|--|---------|-----------|-------------------------|
| Communication Total | | | | | | |
| 44 | 2016 | 34 | | 96.583 | 0.055737 | Furniture And Household |
| Equipment Total | | | | | | |
| 49 | 2016 | 39 | | 98.4047 | 0.0863636 | Miscellaneous Goods And |
| Services Total | | | | | | |
| 47 | 2016 | 37 | | 99.5753 | 0.11022 | Education Culture And |
| Entertainment Total | | | | | | |
| 43 | 2016 | 33 | | 105.184 | 0.103865 | Dwelling And Household |
| Maintenance Total | | | | | | |
| 42 | 2016 | 32 | | 112.809 | 0.0304088 | Housing Total |
| | | | | | | |
| 40 | 2016 | 30 | | 113.56 | 0.270475 | Food Total Excluding |
| Fruits And Vegetables | | | | | | |
| 41 | 2016 | 31 | | 115.928 | 0.0622845 | Vegetables And Fruits |
| Total | | | | | | |
| 46 | 2016 | 36 | | 191.316 | 0.0548813 | Health Total |
| | | | | | | |

Year: 2017

| | Year | prodcode | price_index | weight | description |
|-----|------|----------|-------------|-------------|---|
| 346 | 2017 | 324 | 197.931 | 0.00234048 | Other Housing Expenses |
| 390 | 2017 | 398 | 151.544 | 0.00253624 | Expenses Not Elsewhere Specified |
| 368 | 2017 | 362 | 143.833 | 0.0124985 | Dental Care |
| 383 | 2017 | 391 | 142.158 | 0.0163989 | Cigarettes Tobacco And Smoking Supplies |
| 366 | 2017 | 359 | 140.935 | 0.000775318 | Outerwear Not Elsewhere Specified |
| 337 | 2017 | 312 | 138.986 | 0.0237539 | Fresh Vegetables |
| 370 | 2017 | 364 | 137.101 | 0.0303018 | Other Health Expenses |
| 389 | 2017 | 397 | 136.417 | 0.00332539 | Organization Fees And Donations |
| 349 | 2017 | 333 | 134.813 | 0.0185881 | Home Maintenance And Renovation |
| 343 | 2017 | 318 | 130.879 | 0.00174276 | Natural Fruit Juices |

| Bottom price indexes (Secondary): | | | | | | |
|-----------------------------------|------|----------|-------------|-------------|--|--|
| | Year | prodcode | price_index | weight | description | |
| 344 | 2017 | 321 | 56.0396 | 4.10247e-05 | Government Taxes | |
| 387 | 2017 | 395 | 56.8042 | 0.0136962 | Personal Jewelry And Watches | |
| 386 | 2017 | 394 | 62.3831 | 0.0108559 | Legal And Other Services | |
| 362 | 2017 | 355 | 73.6061 | 0.00165643 | Various Clothing Items | |
| 373 | 2017 | 373 | 77.8173 | 0.0213625 | Culture Sports And Entertainment Events | |
| 375 | 2017 | 375 | 82.0588 | 0.0101729 | Durable Culture And Entertainment Products | |
| 357 | 2017 | 345 | 84.4738 | 0.00755269 | Home Decoration Items | |
| 359 | 2017 | 352 | 85.7036 | 0.0229228 | Womens Outerwear | |
| 379 | 2017 | 382 | 87.1068 | 0.01265 | Travel Abroad | |
| 358 | 2017 | 351 | 87.2749 | 0.0103039 | Mens Outerwear | |
| Top price indexes (Primary): | | | | | | |
| | Year | prodcode | price_index | weight | description | |
| 56 | 2017 | 36 | 130.25 | 0.0549909 | Health Total | |
| 51 | 2017 | 31 | 126.465 | 0.0624627 | Vegetables And Fruits Total | |
| 50 | 2017 | 30 | 117.645 | 0.269249 | Food Total Excluding Fruits And Vegetables | |
| 53 | 2017 | 33 | 112.247 | 0.104162 | Dwelling And Household Maintenance Total | |
| 54 | 2017 | 34 | 107.516 | 0.0557183 | Furniture And Household Equipment Total | |
| 52 | 2017 | 32 | 102.236 | 0.0302919 | Housing Total | |

| | | | | | | | |
|---------------------|------|----|---------|-----------|-------------------------|--|--|
| | | | | | | | |
| 59 | 2017 | 39 | 100.985 | 0.0864672 | Miscellaneous Goods And | | |
| Services Total | | | | | | | |
| 58 | 2017 | 38 | 98.7344 | 0.156943 | Transport And | | |
| Communication Total | | | | | | | |
| 57 | 2017 | 37 | 96.7553 | 0.110068 | Education Culture And | | |
| Entertainment Total | | | | | | | |
| 55 | 2017 | 35 | 94.1156 | 0.0696471 | Clothing And Footwear | | |
| Total | | | | | | | |

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Bottom price indexes (Primary):

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| | | | | | | |
|-----------------------|------|----------|-------------|-----------|-------------------------|--|
| | Year | prodcode | price_index | weight | description | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 55 | 2017 | 35 | 94.1156 | 0.0696471 | Clothing And Footwear | |
| Total | | | | | | |
| 57 | 2017 | 37 | 96.7553 | 0.110068 | Education Culture And | |
| Entertainment Total | | | | | | |
| 58 | 2017 | 38 | 98.7344 | 0.156943 | Transport And | |
| Communication Total | | | | | | |
| 59 | 2017 | 39 | 100.985 | 0.0864672 | Miscellaneous Goods And | |
| Services Total | | | | | | |
| 52 | 2017 | 32 | 102.236 | 0.0302919 | Housing Total | |
| | | | | | | |
| 54 | 2017 | 34 | 107.516 | 0.0557183 | Furniture And Household | |
| Equipment Total | | | | | | |
| 53 | 2017 | 33 | 112.247 | 0.104162 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 50 | 2017 | 30 | 117.645 | 0.269249 | Food Total Excluding | |
| Fruits And Vegetables | | | | | | |
| 51 | 2017 | 31 | 126.465 | 0.0624627 | Vegetables And Fruits | |
| Total | | | | | | |
| 56 | 2017 | 36 | 130.25 | 0.0549909 | Health Total | |

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Year: 2018

Top price indexes (Secondary):

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| | | | | | | |
|--|------|----------|-------------|--------|-------------|--|
| | Year | prodcode | price_index | weight | description | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | | | |
|------------------------|------|-----|---------|-------------|----------------------|
| 454 | 2018 | 397 | 178.188 | 0.00332596 | Organization Fees |
| And Donations | | | | | |
| 428 | 2018 | 356 | 155.519 | 0.000715666 | Sewing Materials And |
| Accessories | | | | | |
| 455 | 2018 | 398 | 152.985 | 0.00253667 | Expenses Not |
| Elsewhere Specified | | | | | |
| 448 | 2018 | 391 | 146.13 | 0.0164646 | Cigarettes Tobacco |
| And Smoking Supplies | | | | | |
| 437 | 2018 | 372 | 141.77 | 0.00432832 | Books And Stationery |
| | | | | | |
| 403 | 2018 | 313 | 138.362 | 0.0157883 | Fresh Fruits |
| | | | | | |
| 408 | 2018 | 318 | 130.132 | 0.00174306 | Natural Fruit Juices |
| | | | | | |
| 443 | 2018 | 381 | 128.739 | 0.0151455 | Public |
| Transportation | | | | | |
| 440 | 2018 | 375 | 127.975 | 0.0103037 | Durable Culture And |
| Entertainment Products | | | | | |
| 395 | 2018 | 304 | 127.245 | 0.0469302 | Dairy Products And |
| Eggs | | | | | |

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Bottom price indexes (Secondary):

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| | | | | | | |
|----------------------|------|------|----------|-------------|-----------------------|-------------|
| | | Year | prodcode | price_index | weight | description |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 411 | 2018 | 324 | 43.866 | 0.00252806 | Other Housing | |
| Expenses | | | | | | |
| 451 | 2018 | 394 | 50.7426 | 0.0108295 | Legal And Other | |
| Services | | | | | | |
| 452 | 2018 | 395 | 62.761 | 0.0136985 | Personal Jewelry And | |
| Watches | | | | | | |
| 444 | 2018 | 382 | 67.7968 | 0.0126522 | Travel Abroad | |
| | | | | | | |
| 438 | 2018 | 373 | 72.1757 | 0.0213837 | Culture Sports And | |
| Entertainment Events | | | | | | |
| 427 | 2018 | 355 | 74.4559 | 0.00165671 | Various Clothing | |
| Items | | | | | | |
| 409 | 2018 | 321 | 75.287 | 0.00129852 | Government Taxes | |
| | | | | | | |
| 422 | 2018 | 345 | 83.3313 | 0.00755398 | Home Decoration Items | |
| | | | | | | |
| 424 | 2018 | 352 | 87.8823 | 0.0229267 | Womens Outerwear | |
| | | | | | | |
| 453 | 2018 | 396 | 88.4396 | 0.0078605 | Bags Suitcases And | |


```

Other Products      |
+-----+-----+-----+-----+-----+-----+
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```

Top price indexes (Primary):

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```

|      | Year | prodcode | price_index | weight | description
|
|-----+-----+-----+-----+-----+-----+

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```

| 61 | 2018 |      31 | 121.599 | 0.0624734 | Vegetables And Fruits
Total

```

```

| 60 | 2018 |      30 | 119.783 | 0.269241 | Food Total Excluding
Fruits And Vegetables

```

```

| 66 | 2018 |      36 | 110.389 | 0.0550457 | Health Total
|

```

```

| 63 | 2018 |      33 | 103.728 | 0.10418 | Dwelling And Household
Maintenance Total

```

```

| 69 | 2018 |      39 | 102.991 | 0.0865146 | Miscellaneous Goods And
Services Total

```

```

| 68 | 2018 |      38 | 97.4402 | 0.156751 | Transport And
Communication Total

```

```

| 67 | 2018 |      37 | 96.8293 | 0.110064 | Education Culture And
Entertainment Total

```

```

| 65 | 2018 |      35 | 95.875 | 0.069659 | Clothing And Footwear
Total

```

```

| 64 | 2018 |      34 | 94.8314 | 0.0543285 | Furniture And Household
Equipment Total

```

```

| 62 | 2018 |      32 | 91.5897 | 0.0317418 | Housing Total
|

```

```

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```

Bottom price indexes (Primary):

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```

```

|      | Year | prodcode | price_index | weight | description
|
|-----+-----+-----+-----+-----+-----+

```

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```

```

| 62 | 2018 |      32 | 91.5897 | 0.0317418 | Housing Total
|

```

```

| 64 | 2018 |      34 | 94.8314 | 0.0543285 | Furniture And Household
Equipment Total

```

```

| 65 | 2018 |      35 | 95.875 | 0.069659 | Clothing And Footwear
Total

```

```

| 67 | 2018 |      37 | 96.8293 | 0.110064 | Education Culture And
Entertainment Total

```

```

| 68 | 2018 |      38 | 97.4402 | 0.156751 | Transport And

```

| | | | | | | |
|-----------------------|------|----|---------|-----------|-------------------------|--|
| Communication Total | | | | | | |
| 69 | 2018 | 39 | 102.991 | 0.0865146 | Miscellaneous Goods And | |
| Services Total | | | | | | |
| 63 | 2018 | 33 | 103.728 | 0.10418 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 66 | 2018 | 36 | 110.389 | 0.0550457 | Health Total | |
| | | | | | | |
| 60 | 2018 | 30 | 119.783 | 0.269241 | Food Total Excluding | |
| Fruits And Vegetables | | | | | | |
| 61 | 2018 | 31 | 121.599 | 0.0624734 | Vegetables And Fruits | |
| Total | | | | | | |

Year: 2019

Top price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|----------------------|------|----------|-------------|-------------|----------------------|
| 476 | 2019 | 324 | 178.765 | 0.0023766 | Other Housing |
| Expenses | | | | | |
| 482 | 2019 | 336 | 165.814 | 0.0188994 | Municipal Taxes |
| | | | | | |
| 496 | 2019 | 359 | 159.183 | 0.000787286 | Outerwear Not |
| Elsewhere Specified | | | | | |
| 514 | 2019 | 391 | 152.693 | 0.0167159 | Cigarettes Tobacco |
| And Smoking Supplies | | | | | |
| 520 | 2019 | 397 | 146.727 | 0.00337672 | Organization Fees |
| And Donations | | | | | |
| 509 | 2019 | 381 | 139.615 | 0.0153766 | Public |
| Transportation | | | | | |
| 466 | 2019 | 311 | 133.891 | 0.00342696 | Potatoes And Sweet |
| Potatoes | | | | | |
| 460 | 2019 | 304 | 133.826 | 0.0476464 | Dairy Products And |
| Eggs | | | | | |
| 471 | 2019 | 316 | 133.134 | 0.000281124 | Preserved And Frozen |
| Fruits | | | | | |
| 479 | 2019 | 333 | 131.639 | 0.0181948 | Home Maintenance And |
| Renovation | | | | | |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|--|------|----------|-------------|--------|-------------|
|--|------|----------|-------------|--------|-------------|

| | | | | | | |
|--------------------------|------|-----|---------|-------------|----------------------|--|
| | | | | | | |
| | | | | | | |
| 474 | 2019 | 321 | 28.9595 | 4.16579e-05 | Government Taxes | |
| 507 | 2019 | 377 | 59.1292 | 0.000104239 | Vacation Unit | |
| Purchase And Maintenance | | | | | | |
| 518 | 2019 | 395 | 60.233 | 0.0139076 | Personal Jewelry And | |
| Watches | | | | | | |
| 510 | 2019 | 382 | 82.6786 | 0.0128453 | Travel Abroad | |
| 517 | 2019 | 394 | 86.9515 | 0.0111942 | Legal And Other | |
| Services | | | | | | |
| 492 | 2019 | 355 | 88.8468 | 0.00147307 | Various Clothing | |
| Items | | | | | | |
| 486 | 2019 | 344 | 90.0647 | 0.00504756 | Bed Linens And | |
| Towels | | | | | | |
| 519 | 2019 | 396 | 91.4126 | 0.00798333 | Bags Suitcases And | |
| Other Products | | | | | | |
| 516 | 2019 | 393 | 96.8249 | 0.0222449 | Personal Products | |
| And Cosmetics | | | | | | |
| 501 | 2019 | 371 | 96.8359 | 0.0367269 | Education Services | |

Top price indexes (Primary):

| | Year | prodcode | price_index | weight | description | |
|-----------------------|------|----------|-------------|-----------|-------------------------|--|
| 73 | 2019 | 33 | 122.752 | 0.104756 | Dwelling And Household | |
| Maintenance Total | | | | | | |
| 70 | 2019 | 30 | 121.262 | 0.26241 | Food Total Excluding | |
| Fruits And Vegetables | | | | | | |
| 71 | 2019 | 31 | 119.914 | 0.0631286 | Vegetables And Fruits | |
| Total | | | | | | |
| 76 | 2019 | 36 | 113.271 | 0.0557923 | Health Total | |
| 72 | 2019 | 32 | 113.057 | 0.03084 | Housing Total | |
| 74 | 2019 | 34 | 110.947 | 0.0564112 | Furniture And Household | |
| Equipment Total | | | | | | |
| 78 | 2019 | 38 | 105.694 | 0.159118 | Transport And | |
| Communication Total | | | | | | |
| 79 | 2019 | 39 | 105.058 | 0.0880372 | Miscellaneous Goods And | |
| Services Total | | | | | | |
| 77 | 2019 | 37 | 104.226 | 0.108994 | Education Culture And | |

| | | | | | | | |
|--|------|------|----------|-------------|-------------------------|-------------|--|
| Entertainment Total | | | | | | | |
| 75 | 2019 | 35 | 102.669 | 0.0705132 | Clothing And Footwear | | |
| Total | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| Bottom price indexes (Primary): | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| | | Year | prodcode | price_index | weight | description | |
| | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| 75 | 2019 | 35 | 102.669 | 0.0705132 | Clothing And Footwear | | |
| Total | | | | | | | |
| 77 | 2019 | 37 | 104.226 | 0.108994 | Education Culture And | | |
| Entertainment Total | | | | | | | |
| 79 | 2019 | 39 | 105.058 | 0.0880372 | Miscellaneous Goods And | | |
| Services Total | | | | | | | |
| 78 | 2019 | 38 | 105.694 | 0.159118 | Transport And | | |
| Communication Total | | | | | | | |
| 74 | 2019 | 34 | 110.947 | 0.0564112 | Furniture And Household | | |
| Equipment Total | | | | | | | |
| 72 | 2019 | 32 | 113.057 | 0.03084 | Housing Total | | |
| | | | | | | | |
| 76 | 2019 | 36 | 113.271 | 0.0557923 | Health Total | | |
| | | | | | | | |
| 71 | 2019 | 31 | 119.914 | 0.0631286 | Vegetables And Fruits | | |
| Total | | | | | | | |
| 70 | 2019 | 30 | 121.262 | 0.26241 | Food Total Excluding | | |
| Fruits And Vegetables | | | | | | | |
| 73 | 2019 | 33 | 122.752 | 0.104756 | Dwelling And Household | | |
| Maintenance Total | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| Year: 2020 | | | | | | | |
| Top price indexes (Secondary): | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| | | Year | prodcode | price_index | weight | description | |
| | | | | | | | |
| +-----+-----+-----+-----+-----+-----+-----+----- | | | | | | | |
| -----+----- | | | | | | | |
| 544 | 2020 | 333 | 206.182 | 0.0184896 | Home Maintenance And | | |
| Renovation | | | | | | | |
| 574 | 2020 | 382 | 166.316 | 0.00996999 | Travel Abroad | | |
| | | | | | | | |
| 566 | 2020 | 371 | 161.058 | 0.0363452 | Education Services | | |
| | | | | | | | |

| | | | | | |
|----------------------|------|-----|---------|-------------|----------------------|
| 578 | 2020 | 391 | 160.975 | 0.0169867 | Cigarettes Tobacco |
| And Smoking Supplies | | | | | |
| 584 | 2020 | 397 | 158.395 | 0.00343143 | Organization Fees |
| And Donations | | | | | |
| 573 | 2020 | 381 | 156.739 | 0.0156257 | Public |
| Transportation | | | | | |
| 537 | 2020 | 316 | 156.57 | 0.000285679 | Preserved And Frozen |
| Fruits | | | | | |
| 558 | 2020 | 356 | 155.657 | 0.00073836 | Sewing Materials And |
| Accessories | | | | | |
| 585 | 2020 | 398 | 142.53 | 0.00261712 | Expenses Not |
| Elsewhere Specified | | | | | |
| 565 | 2020 | 364 | 140.669 | 0.031268 | Other Health |
| Expenses | | | | | |

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Bottom price indexes (Secondary):

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| | | | | | |
|--|------|----------|-------------|--------|-------------|
| | Year | prodcode | price_index | weight | description |
| | | | | | |

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| | | | | | |
|---------|------|-----|---------|-----------|----------------------|
| 582 | 2020 | 395 | 53.1229 | 0.0135853 | Personal Jewelry And |
| Watches | | | | | |

| | | | | | |
|----------|------|-----|---------|-----------|-----------------|
| 581 | 2020 | 394 | 66.7271 | 0.0102027 | Legal And Other |
| Services | | | | | |

| | | | | | |
|-----|------|-----|---------|-----------|-----------|
| 548 | 2020 | 341 | 79.8088 | 0.0130125 | Furniture |
| | | | | | |

| | | | | | |
|------------------------|------|-----|---------|------------|---------------------|
| 570 | 2020 | 375 | 81.1623 | 0.00905943 | Durable Culture And |
| Entertainment Products | | | | | |

| | | | | | |
|----------------------|------|-----|---------|-----------|--------------------|
| 568 | 2020 | 373 | 81.3659 | 0.0138025 | Culture Sports And |
| Entertainment Events | | | | | |

| | | | | | |
|-----|------|-----|---------|----------|------------------|
| 575 | 2020 | 383 | 87.1345 | 0.112979 | Vehicle Expenses |
| | | | | | |

| | | | | | |
|----------------|------|-----|---------|------------|--------------------|
| 583 | 2020 | 396 | 90.9116 | 0.00811267 | Bags Suitcases And |
| Other Products | | | | | |

| | | | | | |
|-----------|------|-----|---------|-----------|-----------------------|
| 555 | 2020 | 353 | 91.1352 | 0.0104846 | Childrens And Infants |
| Outerwear | | | | | |

| | | | | | |
|-----|------|-----|---------|-----------|------------------|
| 554 | 2020 | 352 | 91.4907 | 0.0236537 | Womens Outerwear |
| | | | | | |

| | | | | | |
|---------------|------|-----|---------|-----------|---------------------|
| 543 | 2020 | 332 | 95.6929 | 0.0330195 | Electricity Gas And |
| Fuel For Home | | | | | |

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Top price indexes (Primary):

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| | Year | prodcode | price_index | weight | description |
|----|------|----------|-------------|-----------|--|
| 86 | 2020 | 36 | 134.974 | 0.0569601 | Health Total |
| 80 | 2020 | 30 | 126.696 | 0.2667 | Food Total Excluding Fruits And Vegetables |
| 83 | 2020 | 33 | 126.459 | 0.106423 | Dwelling And Household Maintenance Total |
| 81 | 2020 | 31 | 125.846 | 0.0641514 | Vegetables And Fruits Total |
| 87 | 2020 | 37 | 124.142 | 0.1027 | Education Culture And Entertainment Total |
| 82 | 2020 | 32 | 122.839 | 0.0314904 | Housing Total |
| 84 | 2020 | 34 | 111.493 | 0.0554065 | Furniture And Household Equipment Total |
| 89 | 2020 | 39 | 107.785 | 0.0877453 | Miscellaneous Goods And Services Total |
| 88 | 2020 | 38 | 101.826 | 0.157255 | Transport And Communication Total |
| 85 | 2020 | 35 | 98.7933 | 0.0711677 | Clothing And Footwear Total |

Bottom price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|----|------|----------|-------------|-----------|---|
| 85 | 2020 | 35 | 98.7933 | 0.0711677 | Clothing And Footwear Total |
| 88 | 2020 | 38 | 101.826 | 0.157255 | Transport And Communication Total |
| 89 | 2020 | 39 | 107.785 | 0.0877453 | Miscellaneous Goods And Services Total |
| 84 | 2020 | 34 | 111.493 | 0.0554065 | Furniture And Household Equipment Total |
| 82 | 2020 | 32 | 122.839 | 0.0314904 | Housing Total |
| 87 | 2020 | 37 | 124.142 | 0.1027 | Education Culture And Entertainment Total |
| 81 | 2020 | 31 | 125.846 | 0.0641514 | Vegetables And Fruits Total |
| 83 | 2020 | 33 | 126.459 | 0.106423 | Dwelling And Household |

| | | | | | | | |
|-----------------------|------|----|---------|-----------|----------------------|--|--|
| Maintenance Total | | | | | | | |
| 80 | 2020 | 30 | 126.696 | 0.2667 | Food Total Excluding | | |
| Fruits And Vegetables | | | | | | | |
| 86 | 2020 | 36 | 134.974 | 0.0569601 | Health Total | | |

Year: 2021

Top price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|----------------------|------|----------|-------------|-------------|----------------------|
| 626 | 2021 | 359 | 270.379 | 0.000793634 | Outerwear Not |
| Elsewhere Specified | | | | | |
| 628 | 2021 | 362 | 221.458 | 0.0127938 | Dental Care |
| 639 | 2021 | 382 | 194.006 | 0.010218 | Travel Abroad |
| 649 | 2021 | 397 | 188.174 | 0.00340395 | Organization Fees |
| And Donations | | | | | |
| 612 | 2021 | 336 | 187.926 | 0.0190518 | Municipal Taxes |
| 601 | 2021 | 316 | 181.811 | 0.000283391 | Preserved And Frozen |
| Fruits | | | | | |
| 621 | 2021 | 354 | 163.779 | 0.00608693 | Underwear Sleepwear |
| And Socks | | | | | |
| 643 | 2021 | 391 | 162.28 | 0.0168507 | Cigarettes Tobacco |
| And Smoking Supplies | | | | | |
| 638 | 2021 | 381 | 158.33 | 0.0152864 | Public |
| Transportation | | | | | |
| 610 | 2021 | 334 | 154.519 | 0.0138436 | Household Help |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|---------|------|----------|-------------|-------------|----------------------|
| 604 | 2021 | 321 | 29.9585 | 4.19938e-05 | Government Taxes |
| 647 | 2021 | 395 | 62.7837 | 0.0140197 | Personal Jewelry And |
| Watches | | | | | |

| | | | | | |
|------------------------|------|-----|---------|------------|---------------------|
| 633 | 2021 | 373 | 69.4305 | 0.0207101 | Culture Sports And |
| Entertainment Events | | | | | |
| 613 | 2021 | 341 | 72.9464 | 0.0135207 | Furniture |
| | | | | | |
| 635 | 2021 | 375 | 80.8844 | 0.00914013 | Durable Culture And |
| Entertainment Products | | | | | |
| 646 | 2021 | 394 | 86.3182 | 0.0100951 | Legal And Other |
| Services | | | | | |
| 616 | 2021 | 344 | 90.4616 | 0.00508825 | Bed Linens And |
| Towels | | | | | |
| 625 | 2021 | 358 | 93.5614 | 0.0168744 | Footwear |
| | | | | | |
| 606 | 2021 | 324 | 95.19 | 0.00250446 | Other Housing |
| Expenses | | | | | |
| 617 | 2021 | 345 | 95.8785 | 0.00773478 | Home Decoration |
| Items | | | | | |

Top price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|-----------------------|------|----------|-------------|-----------|-------------------------|
| ----- | | | | | |
| ----- | | | | | |
| 96 | 2021 | 36 | 148.904 | 0.0562495 | Health Total |
| 93 | 2021 | 33 | 132.738 | 0.105501 | Dwelling And Household |
| Maintenance Total | | | | | |
| 90 | 2021 | 30 | 130.328 | 0.264598 | Food Total Excluding |
| Fruits And Vegetables | | | | | |
| 91 | 2021 | 31 | 126.967 | 0.0636376 | Vegetables And Fruits |
| Total | | | | | |
| 98 | 2021 | 38 | 118.17 | 0.157309 | Transport And |
| Communication Total | | | | | |
| 99 | 2021 | 39 | 113.899 | 0.0875577 | Miscellaneous Goods And |
| Services Total | | | | | |
| 94 | 2021 | 34 | 113.584 | 0.0552841 | Furniture And Household |
| Equipment Total | | | | | |
| 95 | 2021 | 35 | 105.845 | 0.0710818 | Clothing And Footwear |
| Total | | | | | |
| 92 | 2021 | 32 | 104.01 | 0.0311973 | Housing Total |
| | | | | | |
| 97 | 2021 | 37 | 101.343 | 0.107584 | Education Culture And |
| Entertainment Total | | | | | |

Bottom price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|----|------|----------|-------------|-----------|--|
| 97 | 2021 | 37 | 101.343 | 0.107584 | Education Culture And Entertainment Total |
| 92 | 2021 | 32 | 104.01 | 0.0311973 | Housing Total |
| 95 | 2021 | 35 | 105.845 | 0.0710818 | Clothing And Footwear Total |
| 94 | 2021 | 34 | 113.584 | 0.0552841 | Furniture And Household Equipment Total |
| 99 | 2021 | 39 | 113.899 | 0.0875577 | Miscellaneous Goods And Services Total |
| 98 | 2021 | 38 | 118.17 | 0.157309 | Transport And Communication Total |
| 91 | 2021 | 31 | 126.967 | 0.0636376 | Vegetables And Fruits Total |
| 90 | 2021 | 30 | 130.328 | 0.264598 | Food Total Excluding Fruits And Vegetables |
| 93 | 2021 | 33 | 132.738 | 0.105501 | Dwelling And Household Maintenance Total |
| 96 | 2021 | 36 | 148.904 | 0.0562495 | Health Total |

Year: 2022

Top price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-----|------|----------|-------------|-----------|---|
| 711 | 2022 | 394 | 185.514 | 0.0102363 | Legal And Other Services |
| 657 | 2022 | 306 | 172.089 | 0.0120317 | Soft Drinks |
| 714 | 2022 | 397 | 167.384 | 0.0034048 | Organization Fees And Donations |
| 703 | 2022 | 381 | 161.966 | 0.0152903 | Public Transportation |
| 708 | 2022 | 391 | 161.506 | 0.0168549 | Cigarettes Tobacco And Smoking Supplies |
| 679 | 2022 | 342 | 159.828 | 0.0198897 | Electrical Equipment For Home |

| | | | | | |
|-----|------|-----|---------|-------------|-----------------------------------|
| 674 | 2022 | 333 | 159.773 | 0.0183461 | Home Maintenance And Renovation |
| 666 | 2022 | 316 | 159.621 | 0.000283462 | Preserved And Frozen Fruits |
| 691 | 2022 | 359 | 158.988 | 0.000793833 | Outerwear Not Elsewhere Specified |
| 675 | 2022 | 334 | 154.417 | 0.0138471 | Household Help |

Bottom price indexes (Secondary):

| | Year | prodcode | price_index | weight | description |
|-----|------|----------|-------------|-------------|--|
| 669 | 2022 | 321 | 51.4706 | 4.20043e-05 | Government Taxes |
| 712 | 2022 | 395 | 66.4341 | 0.0140232 | Personal Jewelry And Watches |
| 678 | 2022 | 341 | 72.3723 | 0.0133329 | Furniture |
| 700 | 2022 | 375 | 81.416 | 0.00882519 | Durable Culture And Entertainment Products |
| 704 | 2022 | 382 | 84.9057 | 0.0129521 | Travel Abroad |
| 671 | 2022 | 324 | 84.9113 | 0.00250509 | Other Housing Expenses |
| 693 | 2022 | 362 | 93.4693 | 0.0125158 | Dental Care |
| 681 | 2022 | 344 | 94.1932 | 0.00508953 | Bed Linens And Towels |
| 684 | 2022 | 352 | 94.3747 | 0.0234702 | Womens Outerwear |
| 685 | 2022 | 353 | 96.8199 | 0.0104033 | Childrens And Infants Outerwear |

Top price indexes (Primary):

| | Year | prodcode | price_index | weight | description |
|-----|------|----------|-------------|----------|--|
| 100 | 2022 | 30 | 143.655 | 0.264609 | Food Total Excluding Fruits And Vegetables |

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```
[7]: # Extract prodcodes for the last year
last_year = end_year

top_secondary_prodcodes = df_top_secondary[last_year]['prodcode'].unique()
bottom_secondary_prodcodes = df_bottom_secondary[last_year]['prodcode'].unique()
top_primary_prodcodes = df_top_primary[last_year]['prodcode'].unique()
bottom_primary_prodcodes = df_bottom_primary[last_year]['prodcode'].unique()

# Plot top secondary categories price indexes over time
plt.figure(figsize=(12, 8))
filtered_top_secondary_df =
    ↳ combined_secondary_df[combined_secondary_df['prodcode'].
    ↳ isin(top_secondary_prodcodes)]
for prodcode in filtered_top_secondary_df['prodcode'].unique():
    df_prodcode =
    ↳ filtered_top_secondary_df[filtered_top_secondary_df['prodcode'] == prodcode]
    description = df_prodcode['description'].iloc[0] if not
    ↳ df_prodcode['description'].isna().all() else f'Prodcode {prodcode}'
    plt.plot(df_prodcode['Year'], df_prodcode['price_index'], label=description)
plt.xlabel('Year')
plt.ylabel('Price Index')
plt.title('Top Secondary Categories Price Indexes Over Time')
plt.legend()
plt.grid(True)
plt.show()

# Plot bottom secondary categories price indexes over time
plt.figure(figsize=(12, 8))
filtered_bottom_secondary_df =
    ↳ combined_secondary_df[combined_secondary_df['prodcode'].
    ↳ isin(bottom_secondary_prodcodes)]
for prodcode in filtered_bottom_secondary_df['prodcode'].unique():
    df_prodcode =
    ↳ filtered_bottom_secondary_df[filtered_bottom_secondary_df['prodcode'] ==
    ↳ prodcode]
    description = df_prodcode['description'].iloc[0] if not
    ↳ df_prodcode['description'].isna().all() else f'Prodcode {prodcode}'
    plt.plot(df_prodcode['Year'], df_prodcode['price_index'], label=description)
plt.xlabel('Year')
plt.ylabel('Price Index')
plt.title('Bottom Secondary Categories Price Indexes Over Time')
plt.legend()
plt.grid(True)
plt.show()
```

```

# Plot top primary categories price indexes over time
plt.figure(figsize=(12, 8))
filtered_top_primary_df = combined_primary_df[combined_primary_df['prodcode'].
    ↪isin(top_primary_prodcodes)]
for prodcode in filtered_top_primary_df['prodcode'].unique():
    df_prodcode = filtered_top_primary_df[filtered_top_primary_df['prodcode']_
    ↪== prodcode]
    description = df_prodcode['description'].iloc[0] if not_
    ↪df_prodcode['description'].isna().all() else f'Prodcode {prodcode}'
    plt.plot(df_prodcode['Year'], df_prodcode['price_index'], label=description)
plt.xlabel('Year')
plt.ylabel('Price Index')
plt.title('Top Primary Categories Price Indexes Over Time')
plt.legend()
plt.grid(True)
plt.show()

```





